

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims

1. (Previously Presented) A tunable filter with a wide free spectral range, comprising:
a first collimator;
a second collimator with one end opposed to the first collimator; and
a reflector interposed between the first collimator and the second collimator, the reflector comprising a curved lens;
wherein the curved lens and the second collimator define a resonance cavity to determine a resonance frequency.
2. (Previously Presented) The tunable filter as claimed in claim 1, wherein the tunable filter is a heat-actuated type filter and the curved lens is a multi-layered film formed with alternate layers of GaAs and AlAs.
3. (Previously Presented) The tunable filter as claimed in claim 1, wherein the tunable filter is an electrostatic-actuated type filter, and the reflector is a micro-electromechanical system-based (MEMS-based) one-piece reflector comprising a dielectric layer and an electrode layer sequentially formed on a base with an aperture, both the dielectric layer and the electrode layer have an opening corresponding to the aperture.
4. (Currently Amended) The tunable filter as claimed in claim [[2]] 1, wherein the curved lens is a [[the]] multi-layered film [[is]] formed by alternate layers of GaAs and AlAs.
5. (Currently Amended) The tunable filter as claimed in claim [[2]] 1, wherein the curved lens is a [[the]] multi-layered film [[is]] formed by alternate layers of TiO₂ and SiO₂.

6. (Previously Presented) The tunable filter as claimed in claim 1, wherein the first collimator has one end extending towards the second collimator, and the first collimator has an anti-reflection layer coated on the end of the first collimator.

7-9. (Cancelled)

10. (Previously Presented) The tunable filter as claimed in claim 1, wherein each of the first and the second collimator has an inclined plane.

11. (Previously Presented) The tunable filter as claimed in claim 1, wherein the reflector comprises:

a base;

an aperture defined on the base; and

a multi-layered film with high reflection capability formed on the base and extending over the aperture, wherein the multi-layered film extending over the aperture serves as the curved lens and the curved lens has no contact with the base.

12. (Previously Presented) The tunable filter as claimed in claim 1, wherein the second collimator has a lens surface with a reflective layer.

13. (New) The tunable filter as claimed in claim 1, wherein the curved lens is apart from the first collimator.